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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/611,182	07/06/2000	Alexander S. Kozlov	H16-26603	5067

7590 05/22/2003

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EXAMINER

BARR, MICHAEL E

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 05/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/611,182

Applicant(s)

KOZLOV ET AL.

Examiner

Michael Barr

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23, 25 and 26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7, 9-23, 25 and 26 is/are rejected.
- 7) ☒ Claim(s) 5-6, 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments, filed 4/24/2003, have been fully considered and reviewed by the examiner. Claims 1-23 and 25-26 are pending.

The applicant argues against the Torikai reference, in that Torikai includes the use of hydroxyl amine, which the applicant's composition does not. This is not persuasive to the examiner as there is no requirement by the applicant that such a material as a hydroxyl amine be excluded from the composition. The applicant's claimed composition utilizes "comprising" language which leaves the composition open to the presence of other materials, which includes the hydroxyl amine of Torikai. Therefore, the Torikai reference is still applicable to the applicant's claimed invention.

The applicant has argued against the combination references in that there is not suggestion or motivation to combine and that the examiner is using the obvious to try standard to combine the references, which is improper. The examiner respectfully disagrees. As indicated in the previous office action, it is the examiner's position that one skilled in the art, having reviewed the prior art (specifically Torikai and Chang), would have found the claimed process and composition obvious with the expectation of achieving the desired Pt-Rh plating results in Torikai. As established in the previous office action, Torikai teaches the claimed electroless plating composition and process and that the platinum salt can be a platinum ammine salt. However, Torikai does not teach that the platinum ammine salt used is a platinum ammine nitrite. The examiner has applied the Chang reference to meet the deficiency. Chang et al.

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teaches an electroless platinum plating solution utilizing ammonium hydroxide and hydrazine hydrate, where the platinum salt is platinum diammine dinitrite (Claim 9). The platinum diammine dinitrite of Chang et al. meets the platinum salt limitations of the applicant's Claims 1-2 and 4. One of ordinary skill in the art would have recognized, from review of Chang et al., that platinum diammine dinitrite is a known and conventional platinum ammine salt for use in electroless plating baths utilizing ammonium hydroxide and hydrazine hydrate, which also utilized in the bath of Torikai. It would have been suggested to one skilled in the art to use a conventional platinum ammine salt in the process and solution of Torikai, which is conventionally used in electroless solutions utilizing hydrazine hydrate and ammonium hydroxide, with the expectation of providing the desired electroless plating results, as it would have been expected that the platinum ammine salt of Chang would be reduced for plating in the bath of Torikai as the bath of Torikai utilizes the same reducing agent as Chang. Therefore, it would have been obvious to one skilled in the art to use the platinum diammine dinitrite of Chang et al., as the platinum salt material in Torikai, with the expectation of providing the desired electroless plating results, since it is shown by Chang et al. that platinum diammine dinitrite is a known platinum ammine salt for use in electroless plating solutions containing ammonium hydroxide and hydrazine hydrate. One of ordinary skill in the art would have found it expected that such a platinum salt would have been reduced by the plating bath materials of Torikai and thus produce the desired platinum metal for the Pt-Rh alloy layer.

The applicant has argued against the Ishihara reference stating that it is not directed to electroless plating. However, the examiner is merely applying the Ishihara reference to show the conventionality of applying a platinum-rhodium alloy plating over a semiconductor substrate.

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The substrate described by Ishihara meets the limitations of Claim 22. Although Ishihara may not teach applying the Pt-Rh layer by electroless plating, electroless plating of semiconductor material is a well-known and used technique for forming metal layers on semiconductors. One of ordinary skill in the art would have found it obvious to use a substrate, such as that of Ishihara et al. to be platinum-rhodium alloy plated by the plating solution of Torikai and Chang et al., with the expectation of providing the desired plating results, since it is shown by Ishihara et al. that such a substrate is conventionally plated with platinum-rhodium alloy.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4, 7, 9-21, 23, and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 58204168 by Torikai et al. ("Torikai") in view of Chang et al.

Torikai and Chang et al. are applied here for the same reasons as given above and in paragraph 3 of the previous office action.

4. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Torikai and Chang et al. as applied to claim 11 above, and further in view of Ishihara et al.

Torikai, Chang et al., and Ishihara et al. are applied here for the same reasons as given above and in paragraph 4 of the previous office action.

*Allowable Subject Matter*

5. Claims 5-6 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Conclusion*

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

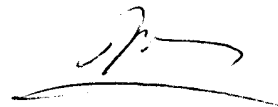
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Barr whose telephone number is 703-305-7919. The examiner can normally be reached on Monday-Thursday 6:00 am-4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on 703-308-2333. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 or 703-305-5408 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Michael Barr  
Primary Examiner  
Art Unit 1762

MB  
May 20, 2003